

WHAT IS CLAIMED IS:

1. A double-coated optical fiber comprising:
a core being a light transmission medium;
5 a cladding surrounding the core and having a smaller reflective index than the core;
a primary coating layer formed of a UV-cured polymer around the cladding; and
a secondary coating layer formed of a UV-cured polymer around the primary
coating layer, to a thickness ranging from about 22 to 37.5 μ m in order to obtain a coating
strip force ranging from about 1.0 to 1.63N.
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2. The double-coated optical fiber of claim 1, wherein the primary coating
layer is about 180 to 210 μ m thick.
3. The double-coated optical fiber of claim 1, wherein the secondary coating
15 layer has a dynamic stress corrosion parameter ranging from about 20 to 29.
4. The double-coated optical fiber of claim 1, wherein the primary coating layer
has a smaller modulus of elasticity than the secondary coating layer.
- 20 5. The double-coated optical fiber of claim 1, wherein a combined diameter of the
core and cladding is about 125 μ m.

6. A method of manufacturing a double-coated optical fiber comprising:

(a) providing a core to serve as a light transmission medium;

(b) surrounding the core with a cladding, said cladding having a smaller reflective index than the core;

5 (c) arranging a primary coating layer formed of a UV-cured polymer around an exterior of the cladding; and

(d) arranging a secondary coating layer around an exterior of the primary coating, wherein said secondary coating layer being formed of a UV-cured polymer around the primary coating layer, to a thickness ranging from about 22 to 37.5 μ m in order to obtain a
10 coating strip force ranging from about 1.0 to 1.63N.

7. The method according to claim 6, wherein the primary coating layer is about 180 to 210 μ m thick.

15 8. The method according to claim 6, wherein the secondary coating layer has a dynamic stress corrosion parameter ranging from about 20 to 29.

9. The method according to claim 6, wherein the primary coating layer has a smaller modulus of elasticity than the secondary coating layer.

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10. The method according to claim 6, wherein a combined diameter of the core and cladding is about 125 μ m.

11. The method according to claim 6, wherein the primary and second coating layers provided in step (c) and (d) are formed by a wet on wet process comprising the steps of:

- (i) drawing a bare optical fiber from an optical perform;
- 5 (ii) sequentially coating liquid UV-cured polymers having different properties onto the bare optical fiber from step (i);
- (iii) irradiating the UV-cured polymers with UV light; and
- (iv) curing the polymers recited in sub-step (iii).

10 12. The method according to claim 6, wherein the primary and second coating layers provided in step (c) and (d) are formed by a wet on dry process comprising the steps of:

- (i) drawing a bare optical fiber from an optical perform;
- (ii) coating a first liquid UV-cured polymer on the optical fiber from step (i);
- 15 (iii) curing the coated polymer by irradiating with UV light;
- (iv) coating a second liquid UV-cured polymer having different properties on the cured coated optical from step (iii); and
- (v) curing the coated polymer from step (iv) by applying UV radiation.